INDEX TO VOLUME 29 1994

Index to Authors and Contributors

AINSWORTH, R. A. *Paper* Design and assessment of components subjected to creep, 201
AKSOGAN, O. *Paper* A specimen for determining fracture properties under combined modes, I, II, and III crack tip conditions, 1
ALMUSALLAM, A. A. *Paper* A three-dimensional graphical method for shear strain analysis, 263
APLIN, P. F. *Paper* Creep life assessment methods, 225
ATHERTON, D. L. *Paper* The application of neutron diffraction to stress mapping around a blind-hole defect in stressed pipeline steel, 317

BAU, J. *Paper* A destructive procedure to determine the residual stresses in thick-walled cylindrical pressure vessels, 57
BECKER, A. A. *Paper* Numerical analysis of creep in components, 185
BROWN, M. W. *Paper* Modelling of the deformation behaviour of flake graphite iron under multi-axial cyclic loading, 277
BUDDEN, P. J. *Paper* Design and assessment of components subjected to creep, 201

CANE, B. J. *Paper* Creep life assessment methods, 225
CLAPHAM, L. *Paper* The application of neutron diffraction to stress mapping around a blind-hole defect in stressed pipeline steel, 317
COLEMAN, M. C. *Paper* Testing of full-size steam plant components, 209
CRAWLEY, N. I. *Paper* The effect of proof testing on the shakedown behaviour of pressure vessel nozzles, 81

DYSON, B. F. *Paper* Mechanisms-based creep constitutive equations for an aluminium alloy, 309

ELLISON, E. G. *Paper* The influence of orientation on the elastic and low cycle fatigue properties of several single crystal nickel base superalloys, 147
EVANS, R. W. *Paper* Acquisition and analysis of creep data, 159

FESSLER, H. *Paper* The use of model materials to simulate creep behaviour, 193
FIDLER, R. *Paper* Testing of full-size steam plant components, 209
FOK, S. L. *Paper* The notched beam in asymmetric four-point bending for brittle material testing, 289

GOODMAN, A. M. *Paper* Constitutive equations for creep, 167
GRANT, R. J. *Paper* A parametric study of the elastic stress distribution in pin-loaded lugs, 299
GUSENKOV, A. P. *Paper* Flexible metal hoses with screw-shaped corrugation and methods of evaluating their carrier capacity, 65

HAMOUDA, A. M. S. *Paper* Development of a one-dimensional constitutive equation for metals subjected to high strain rate and large strain, 117
HARDY, S. J. *Paper* Stress concentration factors for axial and shear loading applied to short flat bars with projections, 93
HARRISON, G. F. *Paper* The application of the Graham and Walles creep equation to aeroengine superalloys, 177
HASHMI, M. S. J. *Paper* Development of a one-dimensional constitutive equation for metals subjected to high strain rate and large strain, 117
HAYHURST, D. R. *Papers* The use of continuum damage mechanics in creep analysis for design, 233. Mechanisms-based creep constitutive equations for an aluminium alloy, 309
HE, D. T. *Paper* Response of AL 7050–T7451 to complex load spectra, 101
HILLS, D. A. *Technical note* Some aspects of the Iosipescu sheer test, 79
HOGNESTAD, G. *Technical note* Some aspects of the Iosipescu shear test, 79
HOLDEN, T. M. *Paper* The application of neutron diffraction to stress mapping around a blind-hole defect in stressed pipeline steel, 317
HOMEWOOD, D. T. *Paper* The application of the Graham and Walles creep equation to aeroengine superalloys, 177
HUANG, C. J. *Paper* An analysis of the symmetric rolling of aluminium strips using a three-dimensional electric–plastic large deformation finite element method, 267

HYDE, T. H. *Papers* A specimen for determining fracture properties under combined modes, I, II, and III crack tip conditions, 1. Numerical analysis of creep in components, 185. The use of model materials to simulate creep behaviour, 193

IBRAHIM, R. *Paper* Response of AL 7050–T7451 to complex load spectra, 101

JENNINGS, A. *Paper* Sperical shells in inelastic collision with a rigid wall—tentative analysis and recent quasi-static testing, 17
JONES, R. *Paper* Response of AL 7050–T7451 to complex load spectra, 101

KELLY, D. W. *Paper* A destructive procedure to determine the residual stresses in thick-walled cylindrical pressure vessels, 57
KINKEAD, A. N. *Paper* Spherical shells in inelastic collision with a rigid wall—tentative analysis and recent quasi-static testing, 17
KOWALEWSKI, Z. L. *Paper* Mechanisms-based creep constitutive equations for an aluminium alloy, 309
KRAINCANIC, I. *Paper* Critical examination of various approaches used for analysing helical cables, 43
KRAUSE, T. W. *Paper* The application of neutron diffraction to stress mapping around a blind-hole defect in stressed pipeline steel, 317

LEINSTER, J. *Paper* Spherical shells in inelastic collision with a rigid wall—tentative analysis and recent quasi-static testing, 17
LI, S. X. *Paper* The influence of orientation on the elastic and low cycle fatigue properties of several single crystal nickel base superalloys, 147
LIE, S. T. *Paper* Analysis of fatigue strength on non-load-carrying and load-carrying fillet welded joints, 243
LIN, Z. C. *Paper* An analysis of the symmetric rolling of aluminium strips using a three-dimensional elastic–plastic large deformation finite element method, 267

MA, B. *Paper* The application of neutron diffraction to stress mapping around a blind-hole defect in stressed pipeline steel, 317
McDONACH, A. *Paper* Heterodyne moiré interferometry for automated strain measurement, 129
McKELVIE, J. *Paper* Heterodyne moiré interferometry for automated strain measurement, 129
MACKENZIE, P. M. *Paper* Heterodyne moiré interferometry for automated strain measurement, 129
MEERSON, B. M. *Paper* Flexible metal hoses with screw-shaped corrugation and methods of evaluating their carrier capacity, 65
MOFFAT, D. G. *Paper* The effect of proof testing on the shakedown behaviour of pressure vessel nozzles, 81
MOORE, A. J. *Paper* Evaluation of fracture mechanic's parameters using electronic speckle pattern interferometry, 257
MORETON, D. N. *Paper* The effect of proof testing on the shakedown behaviour of pressure vessel nozzles, 81
MORTON, J. *Paper* Three-dimensional deformations in a single-lap joint, 137
MOSKVITIN, G. V. *Paper* Flexible metal hoses with screw-shaped corrugation and methods of evaluating their carrier capacity, 65

OLOYEDE, V. O. A. *Paper* Prediction of settled cyclic behaviour of metals using first cycle data and combined hardening laws for reversed plasticity, 105
OLSEN, H. *Paper* The application of neutron diffraction to stress mapping around a blind-hole defect in stressed pipeline steel, 317

PIPELZADEH, M. K. *Paper* Stress concentration factors for axial and shear loading applied to short flat bars with projections, 93

RAOOF, M. *Paper* Critical examination of various approaches used for analysing helical cables, 43
REES, D. *Paper* Response of AL 7050–T7451 to complex load spectra, 101

SMART, J. *Papers* The notched beam in a asymmetric four-point bending for brittle material testing, 289. A parametric study of the elastic stress distribution in pin-loaded lugs, 299

SMITH, D. J. *Paper* The influence of orientation on the elastic and low cycle fatigue properties of several single crystal nickel base superalloys, 147
STANLEY, P. *Paper* A parametric study of the elastic stress distribution in pin-loaded lugs, 299
STARK, H. L. *Paper* A destructive procedure to determine the residual stresses in thick-walled cylindrical pressure vessels, 57

TAHER, S. E-D. *Paper* A three-dimensional graphical method for shear strain analysis, 263
TOLLEY, A. F. *Paper* The effect of proof testing on the shakedown behaviour of pressure vessel nozzles, 81
TRACZ, M. *Technical note* Investigation of residual stress distribution in a rail head, 73
TSAI, M. Y. *Paper* Three-dimensional deformations in a single-lap joint, 137
TURNER, C. E. *Paper* Prediction of settled cyclic behaviour of metals using first cycle data and combined hardening laws for reversed plasticity, 105

TYRER, J. R. *Paper* Evaluation of fracture mechanic's parameters using electronic speckle pattern interferometry, 257

WALKER, C. A. *Paper* Heterodyne moiré interferometry for automated strain measurement, 129
WANG, C. H. *Paper* Modelling of the deformation behaviour of flake graphite iron under multi-axial cyclic loading, 277
WANG, G. S. *Paper* Stress analysis for a lug under various conditions, 7
WEBSTER, G. A. *Paper* Fracture mechanics in the creep range, 215
WHITE, P. S. *Paper* Constitutive equations for creep, 167
WILLIAMS, J. F. *Paper* Response of AL 7050-T7451 to complex load spectra, 101
WILSHIRE, B. *Paper* Acquisition and analysis of creep data, 159

XIA, L. *Paper* Numerical analysis of creep in components, 185

ZOCHOWSKI, M. *Technical note* Investigation of residual stress distribution in a rail head, 73

Subject Index

ACQUISITION AND ANALYSIS OF CREEP DATA, *Paper*, 159
A DESTRUCTIVE PROCEDURE TO DETERMINE THE RESIDUAL STRESSES IN THICK-WALLED CYLINDRICAL PRESSURE VESSELS, *Paper*, 57
AL 7050–T7451, 101
Aluminium:
  strips, 267
  alloy, 309
Analysis:
  creep for design, 233
  numerical, 185
  of creep data, 159
  of fatigue strength, 243
  shear strain, 263
  stress, 7
  symmetric rolling, 267
ANALYSIS OF FATIGUE STRENGTH ON NON-LOAD-CARRYING AND LOAD-CARRYING FILLET WELDED JOINTS, *Paper*, 243
AN ANALYSIS OF THE SYMMETRIC ROLLING OF ALUMINIUM STRIPS USING A THREE-DIMENSIONAL ELASTIC–PLASTIC LARGE DEFORMATION FINITE ELEMENT METHOD, *Paper*, 267
A PARAMETRIC STUDY OF THE ELASTIC STRESS DISTRIBUTION IN PIN-LOADED LUGS, *Paper*, 299
A SPECIMEN FOR DETERMINING FRACTURE PROPERTIES UNDER COMBINED MODES, I, II, AND III CRACK TIP CONDITIONS, *Paper*, 1
Assessment:
  components subjected to creep, 201
  creep life, 225
A THREE-DIMENSIONAL GRAPHICAL METHOD FOR SHEAR STRAIN ANALYSIS, *Paper*, 263
Automated strain measurement, 129

Bar, short flat with projections, 93
Beam, notched, 289
Behaviour:
  creep, 193
  settled cyclic, 105
  shakedown, 81
Bending, asymmetric four-point, 289

Cables, helical, 43
Carrier capacity, 65
Collision, inelastic, 17
Combined hardening laws, 105
Components:
  steam plant, 209
  subjected to creep, 201
CONSTITUTIVE EQUATIONS FOR CREEP, *Paper*, 167
Corrugation, screw-shaped, 65
Crack tip, 1
Creep, 159, 167, 185, 193, 201, 215, 225, 233, 309
  Graham and Walles, 177
  mechanisms-based, 309
CREEP LIFE ASSESSMENT METHODS, *Paper*, 225
CRITICAL EXAMINATION OF VARIOUS APPROACHES USED FOR ANALYSING HELICAL CABLES, *Paper*, 43

Defect, blind-hole, 317
Deformation, 267, 277
  three-dimensional, 137
Design, 201, 233
DESIGN AND ASSESSMENT OF COMPONENTS SUBJECTED TO CREEP, *Paper*, 201
DEVELOPMENT OF A ONE-DIMENSIONAL CONSTITUTIVE EQUATION FOR METALS SUBJECTED TO HIGH STRAIN RATE AND LARGE STRAIN, *Paper*, 117
Diffraction, neutron, 317
Distribution:
  elastic stress, 299
  residual stress, 73

Equation:
  constitutive, 167
  Graham and Walles creep, 177
  mechanisms-based creep constitutive, 309
  one-dimensional constitutive, 117
EVALUATION OF FRACTURE MECHANIC'S PARAMETERS USING ELECTRONIC SPECKLE PATTERN INTERFEROMETRY, *Paper*, 257

Fatigue, 147, 243
Finite element method, 267
First cycle data, 105
Flake graphite iron, 277
FLEXIBLE METAL HOSES WITH SCREW-SHAPED CORRUGATION AND METHODS OF EVALUATING THEIR CARRIER CAPACITY, *Paper*, 65
Fracture, 1, 215, 257
FRACTURE MECHANICS IN THE CREEP RANGE, *Paper*, 215

Hardening, combined, 105
HETERODYNE MOIRÉ INTERFEROMETRY FOR AUTOMATED STRAIN MEASUREMENT, *Paper*, 129
Hoses, flexible metal, 65

Interferometry:
  heterodyne moiré, 129
  electronic speckle pattern, 257
INVESTIGATION OF RESIDUAL STRESS DISTRIBUTION IN A RAIL HEAD, *Technical note*, 73
Iron, flake graphite, 277

Joint:
  fillet welded, 243
  single-lap, 137

Loading:
  axial, 93
  multi-axial cyclic, 277
  shear, 93

Lug, 7
  pin-loaded, 299

Mapping, stress, 317
Mechanics:
  continuum damage, 233
  evaluation of fracture, 257
  fracture, 215, 257
MECHANISMS-BASED CREEP CONSTITUTIVE EQUATIONS FOR AN ALUMINIUM ALLOY, *Paper*, 309
Metals, 65, 105, 117
Method:
  creep life assessment, 225
  three-dimensional elastic–plastic large deformation finite element, 267
  three-dimensional graphical, 263
Modelling, 277
MODELLING OF THE DEFORMATION BEHAVIOUR OF FLAKE GRAPHITE IRON UNDER MULTI-AXIAL CYCLIC LOADING, *Paper*, 277

Neutron diffraction, 317
Nickel, single crystal, 147
NUMERICAL ANALYSIS OF CREEP IN COMPONENTS, *Paper*, 185

Parametric study, 299
Plasticity, reversed, 105
PREDICTION OF SETTLED CYCLIC BEHAVIOUR OF METALS USING FIRST CYCLE DATA AND COMBINED HARDENING LAWS FOR REVERSED PLASTICITY, *Paper*, 105
Pressure vessel, 57
  nozzles, 81
Procedure, destructive, 57
Properties:
  elastic, 147
  low cycle fatigue, 147

Rail head, 73
RESPONSE OF AL 7050–T7451 TO COMPLEX LOAD SPECTRA, *Paper*, 101

Shear:
Iosipescu test, 79
loading, 93
Shells, spherical, 17
Single crystal nickel base, 147
SOME ASPECTS OF THE IOSIPESCU SHEAR TEST, *Technical note*, 79
Spectra complex load, 101
SPHERICAL SHELLS IN INELASTIC COLLISION WITH A RIGID WALL—TENTATIVE ANALYSIS AND RECENT QUASI-STATIC TESTING, *Paper*, 17
Steam plant, 209
Steel, stressed pipeline, 317
Strain:
automated measurement, 129
high rate, 117
large, 117
shear, 263
Stress:
residual, 57, 73
elastic distribution, 299
mapping, 317
STRESS ANALYSIS FOR A LUG UNDER VARIOUS CONDITIONS, *Paper*, 7
Stress concentration factors, 93
STRESS CONCENTRATION FACTORS FOR AXIAL AND SHEAR LOADING APPLIED TO SHORT FLAT BARS WITH PROJECTIONS, *Paper*, 93
Superalloys, 147
Testing:
brittle material, 289
Iosipescu shear, 79
of full-size steam plant components, 209
quasi-static, 17
TESTING OF FULL-SIZE STEAM PLANT COMPONENTS, *Paper*, 209
THE APPLICATION OF NEUTRON DIFFRACTION TO STRESS MAPPING AROUND A BLIND-HOLE DEFECT IN STRESSED PIPELINE STEEL, *Paper*, 317
THE APPLICATION OF THE GRAHAM AND WALLES CREEP EQUATION TO AEROENGINE SUPERALLOYS, *Paper*, 177
THE EFFECT OF PROOF TESTING ON THE SHAKEDOWN BEHAVIOUR OF PRESSURE VESSEL NOZZLES, *Paper*, 81
THE INFLUENCE OF ORIENTATION ON THE ELASTIC AND LOW CYCLE FATIGUE PROPERTIES OF SEVERAL SINGLE CRYSTAL NICKEL BASE SUPERALLOYS, *Paper*, 147
THE NOTCHED BEAM IN ASYMMETRIC FOUR-POINT BENDING FOR BRITTLE MATERIAL TESTING, *Paper*, 289
THE USE OF CONTINUUM DAMAGE MECHANICS IN CREEP ANALYSIS FOR DESIGN, *Paper*, 233
THE USE OF MODEL MATERIALS TO SIMULATE CREEP BEHAVIOUR, *Paper*, 193
THREE-DIMENSIONAL DEFORMATIONS IN A SINGLE-LAP JOINT, *Paper*, 137